

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/003831

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> C07C55/07, 59/01, 59/08, 59/255, 59/265, 65/03, C09B67/02,  
C08K3/30, 9/00, C08L101/00, C09K3/00, B01J20/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> C07C55/07, 59/01, 59/08, 59/255, 59/265, 65/03, C09B67/02,  
C08K3/30, 9/00, C08L101/00, C09K3/00, B01J20/08

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 10-273324 A (Kyowa Chemical Industry Co., Ltd.), 13 October, 1998 (13.10.98), Full text (Family: none)	1-15, 17-29
A	WO 01/004053 A1 (Mizusawa Industrial Chemicals, Ltd.), 18 January, 2001 (18.01.01), Full text & EP 1112960 A1 & US 6706249 B	1-15, 17-29
A	JP 2000-7326 A (Mizusawa Industrial Chemicals, Ltd.), 11 January, 2000 (11.01.00), Full text (Family: none)	1-15, 17-29

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search  
28 March, 2005 (28.03.05)

Date of mailing of the international search report  
12 April, 2005 (12.04.05)

Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 8-41076 A (Fuji Chemical Industry Co., Ltd.), 13 February, 1996 (13.02.96), Full text & EP 636580 A1                      & US 5461082 A	1-15, 17-29

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**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 16  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
The fired product according to claim 16 is not specifically described with respect to its empirical formula and the example of the production and use thereof, and cannot be estimated to be used as a material having performance capabilities (continued to extra sheet)
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

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Continuation of Box No. II-2 of continuation of first sheet (2)

(acid resistance, adsorptivity for a gas and a dye, an elongation of a resin, whitening and light transmittance) being the same as those described in examples. Accordingly, claim 16 is not fully supported by the specification.

<On the scope of the international search with respect to Claims 1 to 15, 17 to 29>

Aluminum salt hydroxide particles according to claim 1 and the like include a great number of such particles containing organic acid anions and inorganic acid anions having a size or properties different from those of a sulfate ion, an oxalate ion and the like (for example, an anion from a heterocyclic carboxylic acid, an anion from amino acid, an anion from tungstic acid and the like), but the specification has no specific description for an aluminum salt hydroxide particles except those wherein A is an oxalate ion and the like and B is a sulfate ion.

Further, in the technical field of an adsorbing agent, a filler and the like, an alunite having an anion from an organic acid is not known as a technical common sense to a person skilled in the art.

Still further, the crystallinity and the form of a crystal of a salt are affected by the size and properties (ionic property, hydrophilic or hydrophobic properties, and the like) of organic and inorganic anions, and it is natural that different anions provide different corresponding salts.

Accordingly, It cannot be considered that aluminum salt hydroxide particles except those wherein A is an oxalate ion and the like and B is a sulfate ion are produced as uniform particles in the same manner and have the same properties, as those particles described in examples.

Therefore, claim 1 and the like are not fully supported by the specification.

Since claims 1 to 15, 17 to 29 are not fully supported by the specification, the relation between the whole of claims 1 to 15, 17 to 29 and the prior art cannot be suitably judged.

As a result, the international search report has been prepared only with respect to "organic acid anion containing aluminum salt hydroxide particles represented by the general formula (1) wherein A is an oxalate ion and the like and B is a sulfate ion, a method for producing the same, and an agent and a composition using the same".